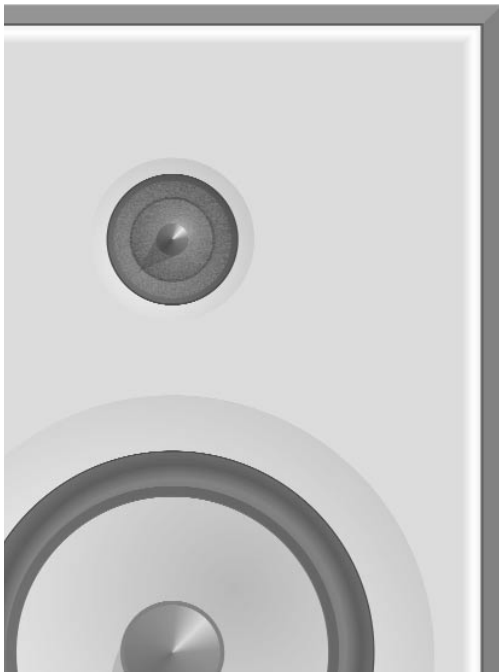


AE1
REFERENCE SERIES
MKIII



1. INTRODUCTION

Welcome to the AE Reference 1. Perhaps more than any other hi-fi product a loudspeaker is sensitive to installation. Please take a little time to read this manual and to follow, as far as practical, the installation guidelines it contains. Careful installation will help ensure that your AE1s perform to the best of their ability. Should you have any questions not covered here we are happy to try and answer them either by telephone or email. Contact information can be found on in Section 9.

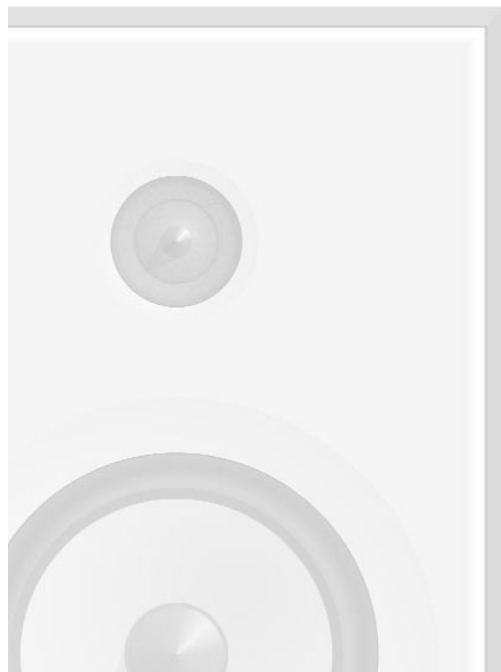
This manual is divided into sections covering handling, loudspeaker stands, positioning, amplifier compatibility, connection, listening, specification, product history, warranty and contact information. We recommend that you read at least the first five sections carefully before installing and using your AE1s.

2. HANDLING

The AE1 is a relatively delicate precision engineered product that can be damaged by inappropriate handling. Please take care when unpacking or moving the speakers not to touch either of the drivers. Damage to a driver will at best degrade an AE1's performance and at worst result in its complete failure.

The veneer and painted surfaces should also be handled sympathetically. Any cleaning should only require a soft cloth, slightly dampened if necessary. Be wary of using any polishes or solvent based cleaning agents.

If practical, the AE1 packaging should be retained for future use. If however you chose to dispose of the packaging please consider the environmental and recycling issues.



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3. LOUDSPEAKER STANDS



The AE1 is intended to be used mounted on loudspeaker stands clear of room boundaries. Alternative mounting arrangements such as wall brackets are possible although these are likely to result in less good performance. If wall brackets are to be used they should be as rigid as possible and firmly attached to brick-built walls.

The construction style, rigidity and dimensions of the loudspeaker stands are of critical significance to the performance of the AE1. Acoustic Energy can supply appropriate stands for the AE1, however, these may not be available in all territories. If this is the case the following specification will help you select appropriate stands. Your retailer or distributor will also be able to offer advice.

AE1 Outline Stand Specification.

Construction Style:	Direct coupled (minimum compliance), single pillar preferred.
Mass Loading:	Preferred (sand fill).
Overall height:	0.56 - 0.64 m (AE1 top panel to be just below head height when seated).
Top plate Dimensions	
Minimum width:	120 mm
Maximum width:	175 mm
Minimum depth:	180 mm
Maximum depth:	230 mm
Top plate to speaker interface:	Direct coupled tri-point or damped-compliance.
Stand to floor interface:	Floor spikes (M8 minimum).

4. POSITIONING

The position of loudspeakers within the listening room is likely to have more influence over their performance than any other aspect of their installation. It is worth spending some time experimenting with both the finer points of positioning as well as the larger scale issues of room layout.

If you are already familiar with the acoustic characteristics of your listening room and the way loudspeakers perform in it you may already have a good feel for where to position your AE1s. However, installing any new hi-fi component provides a good opportunity to review an existing set-up and perhaps make improvements.

The fundamental position requirements for a pair of AE1s installed in an averagely sized and furnished listening room (say 5m x 6m) are as follows:

- Between 0.5 and 1 metre from the rear wall.
- Minimum 1 metre from side walls.
- Between 2.5 and 3.5 metres apart.
- Well clear of corners.
- Angled inwards by between 5 and 10 degrees.

As described in Section 3 above, they should be mounted on stands around 0.6 metres high. AE1s are magnetically shielded and can be used in relatively close proximity to CRT screens.

While it is often the first instinct to position a pair of loudspeakers against the shorter wall of a

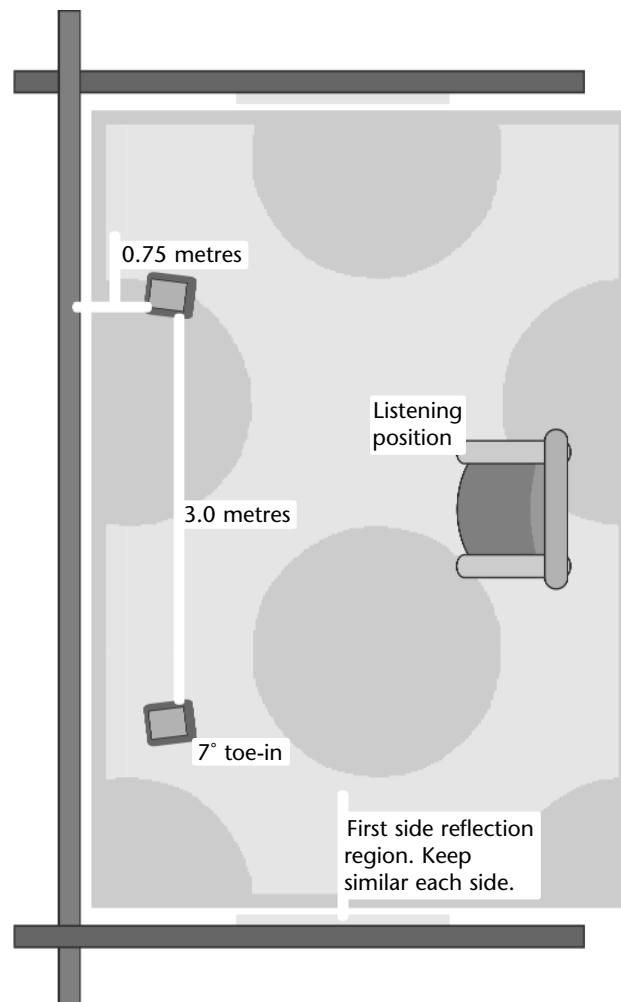
4. POSITIONING

rectangular room, it is often the case that use against the longer wall will produce better results. This is because the long wall position tends to result in less prominent reflections from the side walls of the room. However, whether used against the long or short wall, it is important that each loudspeaker of the pair is located in a similar acoustic environment (different environments would be, say, a curtained area and a solid wall). Similarly, the acoustic character of the side walls of the room in the area where the main reflection between speakers and listening position will occur should also be similar. Diagram One illustrates a typical layout with some of these issues highlighted.

Once the AE1s are connected (see the following section) and working, and you begin to become familiar with their performance, it is likely to be worthwhile experimenting a little more with their positioning.

Reducing the distance between the AE1s and the rear wall will increase the level of bass and low midrange making the speakers sound warmer. The warmth however is likely to be gained at the expense of some mid-range clarity and stereo image focus and depth. Increasing the toe-in angle of the speakers may regain some image focus but again this is lightly to be at a cost of image width and openness. Learning through experimentation how AE1s behave in your room will help you find the optimum solution.

DIAGRAM 1



5. AMPLIFIERS

The AE1 is a relatively low sensitivity speaker and so requires a generously rated power amplifier if relatively high volume levels are to be comfortably achieved in an average listening room. A minimum of 50 and maximum of 200 Watts into 8 Ohms per channel is recommended. AE1s offer a relatively easy load to the amplifier and do not make unusually heavy demands on its current delivery.

No overload protection systems are fitted to the AE1 so it is possible to cause damage through overdriving. Such damage can occur whatever the power rating of the amplifier and is not covered by any guarantee. If ever the sound at high volumes becomes distorted your AE1s are at risk of damage. In such circumstances the volume must be reduced.

6. CONNECTING

Connecting your AE1s to an amplifier is a fundamentally simple process, however there are some issues to bear in mind concerning connectors and connection, cable type and amplifier compatibility. The connection panel is illustrated in Diagram 2.

Each pair of AE1s is fitted with one pair of WBT binding-post terminals. Thanks to the AE1's meticulous filter circuit layout there is no need, or advantage to be gained, from "bi-wiring". The terminals can accept either stripped wires, spade connectors, or 4mm terminals. Each termination method is potentially equally effective and the choice of termination is likely to be influenced by type of loudspeaker cable used. Your dealer, distributor or cable manufacturer will be able to offer advice.

It is important when connecting AE1s to ensure that each speaker is connected with the same polarity. The positive (left hand) terminal should be connected back to the positive terminal of the amplifier and the negative (right hand) connected back to the amplifier's negative. No damage will occur if AE1s are connected with incorrect polarity however their performance will be seriously degraded. Take care when connecting the AE1s not to touch the negative and positive terminals together and "short-circuit" the amplifier. Connections are best made with the amplifier switched off.

Choice of cable type will be influenced by the characteristics of other components in your hi-fi system and again your dealer or distributor will be able to advise. Even so, there are some simple guidelines to consider:

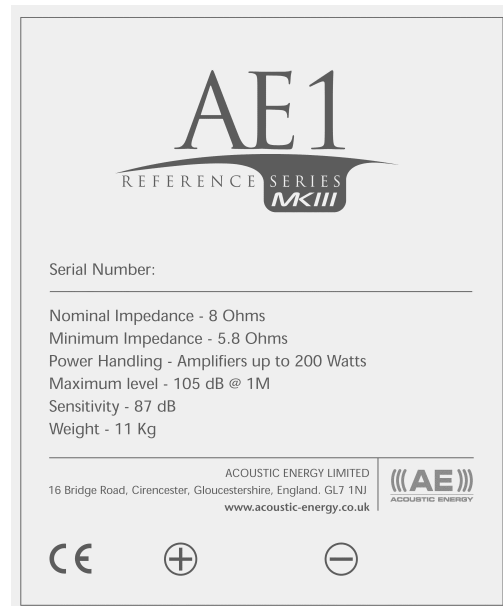
- Cable runs to each speaker should be kept as short as possible consistent with each being of equal length.
- Short cable runs are especially important if the cable is of relatively small cross-sectional-area.
- If the cable type is advertised as "directional" care should be taken to ensure that the orientation of the cable is as recommended.

7. LISTENING

It is wise before listening to your AE1s to make one final check of the cables and connections. If all appears well begin listening at a relatively low level to confirm that the system is operating as expected. Only increase the volume if you are happy that the sound at low levels is fundamentally as expected. If you are unhappy, turn the system off and recheck all the cables and connections.

AE1s will take a little time to "run-in", and similarly the system will also perhaps take some time to reach normal operating temperatures. It is unwise therefore to make rapid judgements about the performance of the speakers. Your ears too will take some time to adjust to the new sound, so revisiting the system set-up, loudspeaker positioning especially, is best for a few days.

DIAGRAM 2



8. AE1 HISTORY

The original AE1 was first introduced to the audio industry with spectacular success early in 1988. It is best remembered for introducing an innovative metal-cone driver technology that subsequently influenced loudspeaker designers and manufacturers the World over.

The AE1 was primarily designed to satisfy the needs of the professional audio sector and quickly acquired a global reputation with musicians, recording artists and studio engineers. However, audiophiles were also quick to discover its dynamic accuracy and transparency, precise stereo imaging, high power handling and linearity. The hi-fi market rapidly became an integral part of Acoustic Energy's growth.

While the Series II AE1 of the mid 1990s introduced relatively small scale enhancements and revisions, the Series III product marks a complete reappraisal of design and technology. Remaining true to the philosophy and qualities of the original it brings significant performance gains across every parameter.

9. SPECIFICATION



Type: Compact, two-way, reflex loaded, vertical-in-line format reference monitor.

Frequency Response: 55Hz to 20kHz ± 2.5 dB

Frequency Range: 38Hz to 30kHz @ -6dB

Power Handling: 75W peak programme

Amplifier Compatibility: 50 - 200 Watts into 8 Ohms

Maximum Level: 105dB spl at 1 metre

Impedance: Nominal 8 ohms [Mean 10 ohms, minimum 5.8 ohms]

Sensitivity: 87dB for 1 Watt at 1 metre

Distortion: < 0.25% @ 86dB spl above 100Hz

Optimum Stand Height: 0.6m ± 4 cm

Recommended Toe-in: 7 degrees inward

Size (H x W x D): 310 x 185 x 238 mm

Weight: 11 kg

Acoustic Energy reserves the right to modify product specifications.

10. WARRANTY

Your Acoustic Energy loudspeakers are guaranteed against original defects in materials, manufacture and workmanship for 3 years from the date of purchase. Please retain all original packaging materials for possible future use. We suggest that you complete details of purchase now and keep this information in a safe place for future reference.

Under this warranty Acoustic Energy agrees to repair any defect or, at the company's discretion, replace the faulty component(s) without charge for parts or labour. This warranty does not imply any acceptance by Acoustic Energy or its agents for consequential loss or damage and specifically excludes fair wear and tear, accident, misuse or unauthorised modification.

This warranty is applicable in the United Kingdom only and does not in anyway limit the customer's legal rights. Claims and enquiries under the warranty for AE products purchased outside the UK should be addressed to the local importers or distributors.

If you have reason to claim under the warranty please in the first instance contact your dealer.

Dealer: _____

Address: _____

Purchase Date: _____

Serial Numbers: _____

11. CONTACT

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